Appendix D Avoidance, Minimization, and/or Mitigation Summary

This page intentionally left blank

Date: March 2016
Environmental Coordinator: Bahar Heydari
Phone No.: (949) 724-2703

ENVIRONMENTAL COMMITMENTS RECORD
(ECR)

District-County–Route: 12-ORA-241 PM 36.1/39.1, 12-ORA-91 PM 14.7/18.9
EA and Project No: 0K9700 and 1200020097
Project Description: SR-241/SR-91 Express Lanes Connector

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
DESIGN KICK-OFF	Project Management and Project Development	Beginning of 1 phase							
ENVIRONMENTAL PS&E REVIEW	Project Management and Environmental	District Plans, Specifications and Estimates (PS&E) Circulation							
PRECONSTRUCTION MEETING	Project Management	Contract Award							
Transfer Resident Engineer Book	Project Engineer	Preconstruction Meeting							
PREJOB MEETING	Project Management and Construction	Construction							
ENVIRONMENTAL COMPLIANCE REVIEW	Project Management and Construction	Safety Review							
DESIGN FEATURES MEMORANDUM	Project Management and Construction	Post Construction							
Utilities and Emergency Services									
Minimization Measure U-1: Utilities. During final design, utility protection-in-place plans will be prepared in consultation with the affected utility providers/owners for those utility facilities anticipated to be relocated, removed, and protected in-place. Final design will focus on avoiding utility relocations. If relocation is necessary, final design will focus on relocating utilities within the State right-of-way or within other existing public rights-of-way and/or easements. If relocation outside of existing or the additional public rights-of-way and/or easements required for the project is necessary, final design will focus on relocating those facilities in such a manner as to minimize environmental impacts as a result of project construction and ongoing maintenance and repair activities. The utility relocation plans will be included in the project specifications. Prior to and during construction, the F/ETCA will ensure that the components of any utility relocation plans provided in the project specifications are properly implemented by the construction contractor.	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and during construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
Minimization Measure UES-2: Law Enforcement, Fire Protection, and Emergency Medical Service Providers. Prior to and during construction, the F/ETCA will require the construction contractor to coordinate all temporary ramp and lane closures and detour plans with law enforcement, fire protection, and emergency medical service providers to minimize temporary delays in emergency response times. The plans shall be developed in coordination with the affected agencies and shall include the identification of alternative routes and access to construction areas for emergency vehicles.	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No						
Minimization Measure UES-3: Law Enforcement, Fire Protection, and Emergency Medical Service Providers. Prior to operation of the connector, an emergency call box shall be placed along the alignment in compliance with OCTA Call Box placement policies.	Project Engineer, Resident Engineer, and Construction Contractor	During construction	No						
ETC Final EIR and Final EIS Measure U-2. *In conjunction with Final Design, the TCA shall explore the joint use of Corridor maintenance roads, if needed, by the County and utility companies. (North and East Legs)*	Project Engineer	During Final Design	No						
ETC Final EIR and Final EIS Measure PS-2. *The impact on other law enforcement agencies is considered to be minor. Implementation of several measures by the TCA shall assist law enforcement agencies in fulfilling their responsibilities and in avoiding confusion in providing service to their jurisdictions. These measures are: clear identification of jurisdictional boundaries along the Corridor, clearly signed and well lit intersections, and distance location markers along the Corridor. (North and East Legs)*	Project Engineer	During Final Design	No						
Traffic and Transportation/Pedestrian and Bicycle Facilities									
Minimization Measure TR-1: Transportation Management Plan. Ensure that a Transportation Management Plan (TMP) is completed in consultation with the California Department of Transportation and included in the Plans, Specifications, and Estimates for implementation by the contractor prior to and during construction of any project improvements. The TMP will be prepared by a qualified traffic engineer and will address traffic impacts from temporary detours and weekend	Project Engineer, Project Traffic Engineer, and Resident Engineer	During Final Design and construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
or nighttime closures to reduce traveler delays and enhance traveler safety during project construction. The TMP may include the following elements: • Public awareness campaign • Highway advisory radio • Portable changeable message signs • Temporary loop sensor/signals • Bus or shuttle service • Construction Zone Enhanced Enforcement Program									
ETC Final EIR and Final EIS Measure T-13. *During final design, the TCA shall establish ETC bridge structure clearances to provide an absolute minimum construction false work vertical clearance of 14.0 feet over existing and planned arterial undercrossing identified in the Orange County Master Plan of Arterial Highways.*	Project Engineer	During Final Design	No						
ETC Final EIR and Final EIS Measure C-15. *All traffic control measures shall conform with applicable local and State Regulations.*	Project Engineer and Resident Engineer	During Final Design and construction	No						
Visual									
Minimization Measure V-1: Lighting Fixtures. In conjunction with Final Design, proposed lighting fixtures shall be hooded where feasible and lighting shall be directed on the site to minimize potential intrusion of light and glare onto nearby land uses. Lighting shall be designed consistent with the existing lighting along the State Route 241 corridor.	Project Engineer and Construction Contractor	During Final Design	No						
Minimization Measure V-2: Hillsides. To avoid visual impacts resulting from cut hillsides and filled topography, hills should be preserved where possible. All disturbed areas associated with cut-and-fill activities should appear similar in color to existing topography. Manufactured fill slopes should not exceed a four-to-one ratio. Manufactured cut slopes should not exceed a two-to-one ratio. Rounding of manufactured slopes should be applied.	Project Engineer and District Landscape Architect	During Final Design	No						
Minimization Measure V-3: Architectural Treatments. To maintain consistency with the existing infrastructure (i.e., bridges and walls, etc.) in the Project Area, landscape and/or architectural treatments (i.e., color, texture, etc.) for the structure elements of the Proposed Project shall be determined in consultation with the District Landscape Architect during the Final Design process.	Project Engineer and District Landscape Architect	During Final Design	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
Minimization Measure V-4: Landscaping. To maintain the context of the Project Area (color, form, and texture) the Proposed Project shall install landscaping that is compatible with the existing landscape along the freeway. The landscape concept and plant palette shall be determined in consultation with the District Landscape Architect during the Final Design process. Erosion control plant species utilized shall be determined by the District Landscape Architect to ensure that the mix and application strategy is appropriate for the specific soil composition of the area. Drought-tolerant native species shall be used adjacent to areas of native habitat. Enhanced plantings shall occur adjacent to wildlife crossings.	Project Engineer and District Landscape Architect	During Final Design	No						
Minimization Measure V-5: Construction Lighting. For all nighttime construction activities, necessary lighting for safety and construction purposes shall be contained and directed toward the specific area of construction.	Resident Engineer and District Landscape Architect	During construction	No						
Measure V-6: Context-sensitive Solutions. Context-sensitive solutions will be used. Slopes graded for the Build Alternative will be contoured consistent with the existing topography, and all disturbed soil areas will be seeded with drought-tolerant native plant species consistent with existing vegetation.	Resident Engineer, District Landscape Architect, and Construction Contractor	During Final Design and construction	No						
Measure V-7: Tree Planting. Permanently impacted Coast live oak, California walnut, and sycamore trees will be replaced at a minimum 1:1 ratio. Heritage oaks (oaks greater than 36 inches in diameter at breast height) will be replaced at a minimum 3:1 ratio.	Resident Engineer, District Landscape Architect, and Construction Contractor	During construction	No						
ETC Final EIR and Final EIS Measure C-19. *Where appropriate and feasible, construction staging areas shall be located inconspicuously to minimize adverse visual effects on residential and recreation areas. They shall be located to avoid any additional impacts on biological, historical or cultural resources. (Construction Staging, North and East Legs)*	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No						
Cultural Resources									
Avoidance and Minimization Measure CR-1: Cultural Materials. If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and	Resident Engineer and Construction Contractor	During Final Design, construction, and after construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
significance of the find. At that time, the Caltrans District 12 Environmental Branch Chief will be contacted to ensure that Section 106 compliance is maintained.									
Avoidance and Minimization Measure CR-2: Human Remains. If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities will cease in any area or nearby area suspected to overlie remains, and the County Coroner will be contacted. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC), who will designate the Most Likely Descendent (MLD). At this time, the Caltrans District 12 Environmental Branch Chief will be contacted so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.	Resident Engineer and Construction Contractor	During Final Design, construction, and after construction	No						
Water Quality and Storm Water Runoff									
Minimization Measure WQ-1: Construction General Permit. The Proposed Project will comply with the requirements prescribed in the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) Order No. 2009-009-DWQ, as amended, or any future replacement permit. The Proposed Project shall comply with the Construction General Permit by preparing and implementing a Storm Water Pollution Prevention Plan (SWPPP) to address all construction-related activities, equipment, and materials that have the potential to impact water quality for the appropriate Risk Level. The SWPPP will identify the sources of pollutants that may affect the quality of storm water and include Best Management Practices (BMPs) to control the pollutants, such as Sediment Control, Catch Basin Inlet Protection, Construction Materials Management and Nonstorm Water BMPs. All work shall conform to the Construction Site BMP requirements specified in the latest edition of the Caltrans *Storm Water Quality Handbooks: Construction Site Best Management Practices Manual* to	Resident Engineer and Construction Contractor	During construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
control and minimize the impacts of construction and construction-related activities, materials, and pollutants on the watershed. These include, but are not limited to, temporary sediment control, temporary soil stabilization, waste management and materials pollution control, wind erosion control, and other nonstorm water BMPs.									
Minimization Measure WQ-2: Caltrans Permit. The Proposed Project will comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit, *Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation*, Order No. 2012-0011-DWQ, NPDES No. CAS000003 (Caltrans Permit), as amended, or any future replacement permit.	Resident Engineer and Construction Contractor	During construction	No						
Minimization Measure WQ-3: Design Pollution Prevention Best Management Practices. Caltrans-approved Design Pollution Prevention BMPs will be implemented to the maximum extent practicable (MEP) consistent with the requirements of the *Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation*, Order No. 2012-0011-DWQ, NPDES No. CAS000003 (Caltrans Permit) and the Caltrans Project Planning and Design Guide. Design Pollution Prevention BMPs include preservation of existing vegetation, slope/surface protection systems (erosion control/reseeding and replanting of vegetation) dikes, overside drains, and concentrated flow conveyance systems such as ditches, berms, and biofiltration swales and strips.	Project Engineer and Resident Engineer	During Final Design and construction	No						
Minimization Measure WQ-4: Treatment Best Management Practices. Caltrans-approved Treatment BMPs will be implemented to the MEP consistent with the requirements of the Caltrans Permit, which is described in Measure WQ-2 and the Project Planning and Design Guide. Treatment BMPs may include biofiltration swales, biofiltration strips, and media filters.	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No						
Minimization Measure WQ-5: Groundwater Dewatering. If groundwater dewatering is required, the Proposed Project will comply with the provisions of General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimus) Threat	Resident Engineer and Construction Contractor	During construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
to Water Quality, Order No. R8-2015-0004, NPDES No. CAG998001, as they relate to discharge of non-storm water dewatering wastes for the Proposed Project.									
ETC Final EIR and Final EIS Measure W-12. *In conjunction with final design, entry into drainages shall be avoided during site preparation, grading and construction, except where required for construction. Activity in drainages shall be limited to crossings rather than using the lengths of drainage courses for access or for parking automobiles, trucks, and construction equipment. In addition, these areas will be marked for "limited access" on construction plans.*	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No						
ETC Final EIR and Final EIS Measure W-14. *During site preparation, grading, and construction, vehicles and equipment shall not be parked in washes or other drainages.*	Resident Engineer and Construction Contractor	During construction	No						
ETC Final EIR and Final EIS Measure W-15. *During site preparation, grading and construction, overwatering shall be avoided in washes and other drainages.*	Project Engineer and Construction Contractor	During construction	No						
ETC Final EIR and Final EIS Measure WQ-2. *The TCA will ensure that all herbicides used in landscaping and weed control are handled, stored, applied, and disposed of consistent with all applicable federal, state, and local regulations.*	Resident Engineer and Construction Contractor	During construction	No						
ETC Final EIR and Final EIS Measure WQ-3. *Whenever feasible, construction vehicles will be rinsed before leaving the construction area to remove mud and other materials before the vehicles leave the site.*	Resident Engineer and Construction Contractor	During construction	No						
ETC Final EIR and Final EIS Measure E-1. *In conjunction with final design, the TCA shall map native vegetation outside the right-of-way on grading and construction plans to indicate vegetation to protect from use as vehicle travel or parking areas, storage of equipment and storage of debris or building materials.*	Project Engineer and Construction Contractor	During Final Design and construction	No						
ETC Final EIR and Final EIS Measure E-3. *During final design, the TCA shall ensure that all proposed grading shall conform to the Caltrans Highway Design Manual and the TCA Project Manual Guidelines. All applicable policies and guidelines shall be listed in the grading plans.*	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No						
ETC Final EIR and Final EIS Measure E-6. *In conjunction with final design, the TCA shall ensure that cut and fill slopes shall not be*	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
steeper than 2:1. Where steeper slopes are indicated, TCA shall, in conjunction with final design, prepare geologic and engineering analyses. These analyses shall determine the safety of those slopes and proposed erosion control measures consistent with Caltrans design standards.									
ETC Final EIR and Final EIS Measure E-9. *As part of final design, TCA shall ensure that all slopes shall conform to slope criteria developed by TCA and Caltrans. All slope criteria shall be noted on final plans.*	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No						
ETC Final EIR and Final EIS Measure E-10. *Fills shall not encroach on natural watercourses or improved channels except as shown on the approved project plans.*	Project Engineer, Resident Engineer, and Construction Contractor	During Final Design and construction	No						
ETC Final EIR and Final EIS Measure E-11. *Fills placed against watercourses shall have suitable protection against erosion during storm flows, such as riprap, protective walls, and culverts.*	Resident Engineer and Construction Contractor	During construction	No						
ETC Final EIR and Final EIS Measure E-12. *During site preparation, grading, and construction, the TCA shall ensure that excavated materials shall not be deposited or stored in or alongside watercourses where the materials can be washed away by high water or storm runoff.*	Resident Engineer and Construction Contractor	During construction	No						
ETC Final EIR and Final EIS Measure E-13. *During site preparation and grading, the TCA shall ensure that all land shall be graded to drain and dispose of surface water without ponding, except where approved by Caltrans or the affected responsible public agency.*	Resident Engineer and Construction Contractor	During construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
Geology									
Minimization Measure GEO-1: Final Geotechnical Report. During Final Design, a qualified geotechnical engineer will conduct a comprehensive geologic and geotechnical investigation and prepare a design-level geotechnical report. This report will document geology-related constraints and hazards such as fault-induced ground rupture, slope instability, settlement, liquefaction, or related secondary seismic impacts that may be present along the alignment of the Build Alternative. The performance standard for this report will be the California Department of Transportation's (Caltrans) Geotechnical Manual (2012 or most recent version) standards as they apply to the project features and structures. The measures recommended in the design-level geotechnical report will be incorporated into the Final Design and project specifications. The construction contractor will implement the measures recommended in the design-level geotechnical reports as included in the project design and specifications.	Project Engineer, Construction Contractor, and Project Geotechnical Engineer	During Final Design	No						
Minimization Measure GEO-2: Quality Assurance/Quality Control Plan. During Final Design, a quality assurance/quality control (QA/QC) plan will be prepared and implemented during construction. The QA/QC plan will include observing, monitoring, and testing by the Project Geotechnical Engineer and/or the Project Geologist prior to and during construction to confirm that the geotechnical/ geologic recommendations from the design-level geotechnical report and standard design and construction practices are fulfilled by the contractor, or if different site conditions are encountered, appropriate changes are made to accommodate such issues. Weekly reports will be prepared during all project-related grading, excavation, and construction activities.	Project Engineer, Resident Engineer, Construction Contractor, and Project Geotechnical Engineer	During Final Design and during construction	No						
Paleontology									
Mitigation Measure PAL-1: Paleontological Mitigation Plan. During Final Design a Paleontological Mitigation Plan (PMP) will be prepared and adhered to during construction. The PMP will follow the guidelines of the Society of Vertebrate Paleontologists (SVP) and Caltrans. The PMP will include, but not be limited to:	Project Engineer, Resident Engineer, Construction Contractor, Project Paleontologist, and District Environmental Specialist	During Final Design, construction, and post construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
a. Attendance at the pregrade meeting by a qualified paleontologist or representative; b. Preconstruction field survey by the paleontological mitigation team; c. Monitoring during construction excavation by the paleontological mitigation team; d. Collection of representative samples from geologic formations; e. Sieving of bulk samples for microfossil recovery; f. Preparation of specimens to the point of identification and permanent preservation; g. Curation of fossils into a repository with permanent retrievable storage that meets Caltrans' requirements; and h. Preparation of a Paleontological Mitigation Report documenting the implementation of the Paleontological Mitigation Plan.									
Hazardous Waste/Materials									
Minimization Measure HAZ-1: Aerially Deposited Lead. Consistent with Minimization Measure MW-3 of the State Route 91 Corridor Improvement Project Final Environmental Impact Report/Environmental Impact Statement (SR-91 CIP 2012 Final EIR/EIS), dated August 2012, the Project Engineer will ensure that a qualified consultant conducts a new soil Aerially Deposited Lead (ADL) evaluation and/or investigation for this project at the Design Phase. The previous ADL test results may be used if applicable along with any new ADL test results. The new soil ADL evaluation and/or investigation will be consistent with the new DTSC Lead Agreement contaminant concentration limits. In addition, new DTSC Lead Agreement soil reuse requirements and restrictions will apply. A Lead Compliance Plan will be prepared to address workers' health and safety.	Project Engineer, Construction Contractor, and Certified Specialist	During Final Design (35 percent Design for work plan and 65 percent Design for evaluation and/or investigation)	No						
Minimization Measure HAZ-2: Asbestos-Containing Materials. During the design phase, a certified specialist will confirm the presence or absence of asbestos in the Gypsum Canyon Road Undercrossing, if demolition/renovation of the bridge structure will occur as part of the Project. If asbestos is present, the certified asbestos abatement specialist should monitor the disposal of the asbestos-containing materials as they are	Project Engineer, Resident Engineer, Construction Contractor, and Certified Specialist	During Final Design and construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
uncovered. The construction contractor will comply with the Caltrans Standard Specifications Section 14-9.02 pertaining to air pollution control compliance with rules, regulations, ordinances, and statues during renovation and demolition activities.									
Minimization Measure HAZ-3: Treated Wood Waste. During construction, the construction contractor will comply with Caltrans Standard Specifications Section 14-10 pertaining to the handling and disposal of treated wood waste.	Resident Engineer and Construction Contractor	During construction	No						
Minimization Measure HAZ-4: Traffic Striping. During construction, the construction contractor will comply with Caltrans Standard Specifications Section 14-11 pertaining to the testing, removal, and disposal of any traffic striping and pavement-marking materials.	Resident Engineer and Construction Contractor	During construction	No						
Minimization Measure HAZ-5: Petroleum Pipeline. During construction, the construction contractor will comply with Caltrans Standard Specifications pertaining to excavation. The contractor shall notify the regional notification center, ensuring that all utility owners within the project disturbance limits identify the locations of underground transmission lines and facilities (including underground petroleum pipelines).	Resident Engineer and Construction Contractor	During construction	No						
Minimization Measure HAZ-6: Construction Contingency Plan. Prior to the start of construction, the construction contractor will prepare a Construction Contingency Plan (CCP) in accordance with Caltrans Unknown Hazards Procedures for Construction, in the Caltrans Construction Manual. The CCP will include provisions for emergency response in the event that unidentified hazardous materials, petroleum hydrocarbons, or hazardous or solid wastes are discovered during construction activities. The CCP will address field screening, contaminant materials testing methods, mitigation and contaminate management requirements, and health and safety requirements for construction workers. The construction contractor will implement the CCP during all construction activities. During construction, the Resident Engineer will require the construction contractor to cease work immediately if an unexpected release of hazardous substances is found in reportable quantities. If an unexpected release of	Resident Engineer and Construction Contractor	During Final Design and construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
hazardous substances is found in reportable quantities, the Resident Engineer will require the construction contractor to notify the National Response Center by calling 1-800-424-8802. The construction contractor will perform cleanup of unexpected releases under the appropriate federal, State, and local agency oversight.									
ETC Final EIR and Final EIS Measure HW-2. *Hazardous substances are strictly regulated by the Environmental Protection Agency (U.S. EPA), the California and National Occupational Safety and Health Administration (OSHA) and the United States Department of Transportation (DOT). The DOT specifies the procedures for safely transporting hazardous materials, as well as the procedures to follow in case of accidental spills during transport, in the 49 Code of Federal Regulations (CFR) series of regulations (parts 100 through 177). U.S. EPA specifies the requirements for proper labeling and placarding of hazardous substances. The American National Standards Institute recommends safety procedures for handling and storing hazardous materials, and OSHA specifies the procedures required for using and storing hazardous materials. These procedures shall be followed during all ETC site preparation, grading, construction, operations, and maintenance.*	Resident Engineer and Construction Contractor	During construction	No						
Air Quality									
Minimization Measure AQ-1: Fugitive Dust Source Controls. During clearing, grading, earthmoving, and excavation operations, excessive fugitive dust emissions will be controlled by regular watering or other dust preventive measures using the following procedures, as specified in the South Coast Air Quality Management District (SCAQMD) Rule 403. • All material excavated or graded will be sufficiently watered to prevent excessive amounts of dust. • Watering will occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. • All material transported on site or off site will be either sufficiently watered or securely covered to prevent excessive amounts of dust. The area disturbed by clearing,	Resident Engineer and Construction Contractor	During construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
grading, earthmoving, or excavation operations will be minimized so as to prevent excessive amounts of dust. • These control techniques will be indicated in project specifications. Visible dust beyond the property line emanating from the Proposed Project will be prevented to the maximum extent feasible.									
Minimization Measure AQ-2: Ozone Precursor Emission Controls. Project grading plans will show the duration of construction. Ozone precursor emissions from construction equipment vehicles will be controlled by maintaining equipment engines in good condition and in proper tune per manufacturers' specifications.	Resident Engineer and Construction Contractor	During construction	No						
Minimization Measure AQ-3: Prevention of Spills onto Public Streets. All trucks hauling excavated or graded material on site will comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2), and (e)(4), as amended, regarding the prevention of such material spilling onto public streets and roads.	Resident Engineer and Construction Contractor	During construction	No						
Minimization Measure AQ-4: Caltrans Standard Specifications for Construction. The contractor will adhere to Caltrans Standard Specifications for Construction (Sections 14-9.02 and 14-9.03).	Resident Engineer and Construction Contractor	During construction	No						
Minimization Measure AQ-5: Construction Vehicles Prohibition. All construction vehicles both on- and off-site shall be prohibited from idling in excess of 10 minutes.	Resident Engineer and Construction Contractor	During construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
Noise									
Minimization Measure N-1: Control of Construction Noise Levels. The control of noise from construction activities will conform to the California Department of Transportation (Caltrans) Standard Specifications, Section 14-8.02, "Noise Control." The nighttime noise level from the contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., will not exceed 86 A-weighted decibels (dBA) one-hour A weighted equivalent continuous sound level ($L_{eq}(h)$) at a distance of 50 feet. In addition, the contractor would equip all internal combustion engines with a manufacturer-recommended muffler and will not operate any internal combustion engine on the job site without the appropriate muffler.	Resident Engineer and Construction Contractor	During construction	No						
Natural Communities									
Minimization Measure NC-1: Coastal California Gnatcatcher Environmentally Sensitive Areas. *Prior to the commencement of grading operations or other activities involving substantial soil disturbance, all areas of CSS habitat to be avoided under the provisions of the NCCP/HCP shall be identified with temporary fencing or other markers clearly visible to construction personnel. Additionally, prior to the commencement of grading operations or other activities involving disturbance of CSS, a survey will be conducted to locate CAGN and cactus wrens within 100 ft of the outer extent of projected soil disturbance activities. The locations of any such species shall be clearly marked and identified on the construction/grading plans.*	Construction Contractor and Monitoring Biologist	Prior to construction	No						
Minimization Measure NC-2: Nesting Coastal California Gnatcatcher. *During clearing or construction, to the maximum extent practicable, no grading of CSS habitat that is occupied by nesting CAGN will occur during the breeding season (February 15 through July 15). It is expressly understood that this provision and the remaining provisions of these "construction-related minimization measures" are subject to public health and safety considerations. These considerations include unexpected slope stabilization, erosion control measures, and emergency facility repairs. In the event of such public health and safety circumstances, landowners or public agencies/utilities will*	Resident Engineer, Construction Contractor, and Project Biologist	During clearing or construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
provide USFWS/CDFW with the maximum practicable notice (or such notice as is specified in the NCCP/HCP) to allow for capture of CAGN, cactus wrens (Campylorhynchus brunneicapillus), and any other CSS Identified Species that are not otherwise flushed and will carry out the following measures only to the extent practicable in the context of the public health and safety considerations. The breeding season is now considered to be from February 15 through August 31; therefore, these dates are applicable to this measure.									
Minimization Measure NC-3: Biological Monitor. *A monitoring biologist acceptable to USFWS/CDFW will be on site during any clearing of CSS. The landowner or relevant public agency/utility will advise USFWS/CDFW at least 7 calendar days (preferably 14 calendar days) prior to the clearing of any habitat occupied by Identified Species to allow USFWS/CDFW to work with the monitoring biologist in connection with bird flushing/capture activities. The monitoring biologist will flush Identified Species (avian or other mobile Identified Species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. If birds cannot be flushed, they will be captured in mist nets, if feasible, and relocated to areas of the site to be protected or to the NCCP/HCP Reserve System. It will be the responsibility of the monitoring biologist to ensure that Identified Species will not be directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities on a timely basis.*	Resident Engineer, Construction Contractor, and Project Biologist	During vegetation clearing	No						
Minimization Measure NC-4: Coastal Sage Scrub Environmentally Sensitive Area. *Following the completion of initial grading/earth movement activities, all areas of CSS habitat to be avoided by construction equipment and personnel will be marked with temporary fencing or other appropriate markers clearly visible to construction personnel. No construction access, parking, or storage of equipment or materials will be permitted within such marked areas.*	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						
Minimization Measure NC-5: Coastal Sage Scrub Access Restrictions. *In areas bordering the NCCP/HCP Reserve System or Special Linkage/Special Management areas containing*	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
substantial CSS identified in the NCCP/HCP for protection, vehicle transportation routes between cut-and-fill locations will be restricted to a minimum number during construction consistent with project construction requirements. Waste dirt or rubble will not be deposited on adjacent CSS identified in the NCCP/HCP for protection. Preconstruction meetings involving the monitoring biologist, construction supervisors, and equipment operators will be conducted and documented to ensure maximum practicable adherence to these measures.									
Minimization Measure NC-6: Coastal Sage Scrub Dust Control. *CSS identified in the NCCP/HCP for protection and located within the likely dust drift radius of construction areas shall be periodically sprayed with water to reduce accumulated dust on the leaves as recommended by the monitoring biologist.*	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						
Minimization Measure NC-7: Coast Live Oak Tree Environmentally Sensitive Areas. Prior to clearing or construction, highly visible barriers and, as needed, silt fencing will be installed around the protected zone of any oak tree or oak habitat. Such areas will be designated on the project specifications as Environmentally Sensitive Areas (ESAs) to be preserved. The ESAs will extend 5 ft outside the dripline or 15 ft from the trunk of each tree, whichever is greater, unless the area includes a road shoulder or existing asphalt. In those instances, safety requires the road shoulder or existing asphalt not be included in the ESA and the boundary of the ESA will be modified accordingly. These modified ESAs are included because impacts to oaks may occur within these road shoulder and asphalt areas if roots become exposed, soil surrounding roots is excessively compacted, material is deposited over roots, or branches or roots are broken or damaged. In addition, to avoid breaking overhanging branches, branch trimming may be required. Proper tree pruning procedures will be followed. No grading or fill activity of any type will be permitted within the ESAs for trees that are expected to be preserved. In addition, heavy equipment, including motor vehicles, will not be	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
allowed to operate in the ESAs. All construction equipment will be operated in such a manner as to prevent accidental damage to nearby oaks. No structure of any kind, or incidental storage of equipment or supplies, will be allowed in the ESAs. Silt fence barriers will be installed at the ESA boundaries to prevent accidental deposition of fill material in areas where trees are immediately adjacent to planned construction activities.									
Minimization Measure NC-8: Coast Live Oak Tree Replacement. During Final Design, the TCA will develop a revegetation program to help compensate for lost oak trees with spacing criteria to be determined by the Project Biologist. Senate Concurrent Resolution No. 17 (filed with the Secretary of State on September 1, 1989) requests all State agencies to preserve and protect native oak woodlands to the maximum extent feasible or to provide for replacement plantings. Impacts to any oak trees (excluding California scrub oaks) with trunk sizes greater than 8 inches diameter at breast height (dbh), but less than 36 inches dbh, will be replaced at a minimum mitigation-to-impact ratio of 1:1. Heritage oaks (oaks greater than 36 inches dbh) will be replaced at a minimum mitigation-to-impact ratio of 3:1. Replacement resources will include a combination of plantings such as acorns, 5-gallon, and 15-gallon trees and/or transplantation where feasible. Replacement plantings may take place in TCA or Caltrans right-of-way or suitable areas in proximity to the project limits.	Project Engineer, Resident Engineer, and Project Biologist	During Final Design and after construction	No						
Minimization Measure NC-9: Existing Wildlife Fencing. If necessary for construction access, the existing wildlife fencing will be removed only after installation of temporary fencing to protect against wildlife-vehicle incidents during construction. Temporary fencing will be the same or greater height than the existing wildlife fencing and must be maintained and functional throughout project construction. After construction, any temporary fencing will be replaced with new permanent fencing consistent with the existing wildlife fencing.	Resident Engineer, Project Biologist, and Construction Contractor	During and after construction	No						
Minimization Measure NC-10: Windy Ridge Wildlife Undercrossing Revegetation. Following the completion of the project construction, all disturbed habitat adjacent to	Resident Engineer and Project Biologist	After construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
Windy Ridge Wildlife Undercrossing will be restored with native vegetation.									
Minimization Measure NC-11: Construction Lighting and Staging. Construction equipment maintenance, lighting, and staging must be in designated areas, away from Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						
Minimization Measure NC-12: Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing Avoidance. During construction, Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing will be avoided as much as is feasible. Activity that must take place at the Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing will be done as quickly as possible and only during daylight hours, subject to public health and safety considerations. If work must be done at night, noise and direct lighting will be directed away from Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing. During vibratory pile driving at Coal Canyon Undercrossing, a noise barrier (temporary construction barrier or a noise curtain surrounding the pile driver) will be installed and monitored. In addition, vibratory pile driving will be limited to no more than 30 minutes in a particular hour.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						
Minimization Measure NC-13: Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing Access. Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing will be kept clear of all equipment or structures that could potentially serve as barriers to wildlife passage.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						
Minimization Measure NC-14: Windy Ridge Wildlife Undercrossing Construction Staging. Within Windy Ridge Wildlife Undercrossing, structures required for bridgework will be erected as to not block the main underpass. Scaffolding and false work will be restricted to the sides of the underpass to maintain the functionality of the crossing for wildlife movement.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
Minimization Measure NC-15: Western Riverside County Multiple Species Habitat Conservation Plan Construction Guidelines. Construction activities in the SR-91 Advanced Signage Area in Riverside County will comply with the objectives, policies, procedures, and guidelines from Section 7.5.3: Construction Guidelines as well as (BMPs outlined in Appendix C (WR-MSHCP Volume 1) of the Western Riverside County Multiple Species Habitat Conservation Plan (WR-MSHCP). The applicable guidelines from Section 7.5.3: Construction Guidelines are: • *When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to coastal sage scrub or chaparral vegetation, appropriate fire-fighting equipment (e.g., extinguishers, shovels, and water tankers) shall be available on the site during all phases of project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or additional fire preventative methods shall be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventative actions, and responses to fires shall advise contractors regarding fire risk from all construction-related activities.* • *Waste, dirt, rubble, or trash shall not be deposited in the Conservation Area or on native habitat.* The applicable practices from the 15 practices listed in Appendix C: Standard Best Management Practices are: • *The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible.* • *To avoid attracting predators of the species of concern, the project site shall be kept clean of debris. All food-related trash items shall be enclosed in sealed containers and regularly removed from the project site.*	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
• *Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project construction activities and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.* • *The Permittee shall have the right to access and inspect any sites of approved projects including any restoration/enhancement area for compliance with project approval conditions including these BMPs.*									
Avoidance and Minimization Measure NC-16: Sensitive Species and Habitats. In conjunction with the final design and prior to site preparation, all sensitive species and special habitats within 300 feet of the Project Area shall be mapped on the grading plans by a qualified biologist. Sensitive and candidate species and special habitats shall be defined as: • Coastal California gnatcatcher • Cactus wren • Designated critical habitat for Coastal California gnatcatcher • Thread-leaved brodiaea • Designated critical habitat for Braunton's milk-vetch • Least Bell's vireo • Southwestern willow flycatcher • Drainages and streambeds • Coastal sage scrub • Coast live oak woodland	Resident Engineer, Project Biologist, and Construction Contractor	Prior to and during construction	No						
ETC Final EIR and Final EIS Measure B-2. *Prior to grading and site preparation, all native oak, sycamore, and willow trees of 4 inches in diameter at breast height (DBH-4 ½ ft from mean ground level) within the Project limits and within 20 ft of grading and construction operations shall be tagged and numbered with permanent tags. The tag numbers of the trees to be protected and those to be removed shall be noted. Records of these numbers shall be kept*	Resident Engineer, Project Biologist, and Construction Contractor	Prior to, during, and after construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
by TCA, the Resource Management Coordinator/Monitor and the Orange County Environmental Management Agency/ Environmental Planning Division for use in mitigation/replacement and monitoring of tree resources before, during and after grading and construction activities.									
ETC Final EIR and Final EIS Measure B-3. *Prior to grading and site preparation, all trees subject to removal shall be marked with a red "X" on the trunk. Trees to be preserved shall be marked with yellow flagging visible from all direction.*	Resident Engineer, Project Biologist, and Construction Contractor	Prior to construction	No						
ETC Final EIR and Final EIS Measure B-4. *In conjunction with grading, site preparation and construction, short term soil stabilization using accepted soil protection techniques and native species shall be conducted under the direction of a qualified biologist, where determined to be appropriate to protect sage scrub communities.*	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						
ETC Final EIR and Final EIS Measure B-8. *For the period covering all site preparation, grading and construction, a resource management coordinator shall monitor wildlife* [and plant] *habitat preservation to ensure that the ESAs and areas outside the Caltrans right-of-way are not adversely impacted. The monitor shall be on site before, during, and after the completion of site preparation, grading and construction.*	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						
ETC Final EIR and Final EIS Measure B-11. *Prior to site preparation, grading and construction, the TCA shall implement procedures for protecting sensitive and candidate species and special habitats* [particularly Braunton's milk-vetch critical habitat] *identified and mapped on grading plans during site preparation, grading, construction and maintenance activities by following Caltrans Environmentally Sensitive Area procedures.*	Resident Engineer, Project Biologist, and Construction Contractor	Prior to and during construction	No						
ETC Final EIR and Final EIS Measure B-25. *During site preparation and grading, the TCA shall phase operations around important habitat areas to allow for completion of nesting and breeding activities for the coastal California gnatcatcher and raptor species occurring in oak woodland~~ as well as willow and sycamore forested woodlands~~. This measure will be conducted and overseen by a qualified biologist.*	Resident Engineer, Project Biologist, and Construction Contractor	Prior to and during construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
Wetlands and Other Waters									
Minimization Measure WET-1: Nationwide Permit. Prior to initiation of construction, a permit will be obtained through the United States Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act. As part of coordination with the USACE, a Nationwide Permit will be pursued, if appropriate.	Project Engineer and Project Biologist	During Final Design and prior to construction	No						
Minimization Measure WET-2: Streambed Alteration Agreement. Prior to initiation of construction, a Streambed Alteration Agreement (SAA) with the California Department of Fish and Wildlife will be obtained and any specifications in the SAA will be implemented.	Project Engineer and Project Biologist	During Final Design and prior to construction	No						
Minimization Measure WET-3: Water Quality Certification. Prior to initiation of construction, a Section 401 Water Quality Certification from the Santa Ana Regional Water Quality Control Board will be obtained and any specifications in the Certification will be implemented.	Project Engineer and Project Biologist	During Final Design and prior to construction	No						
ETC Final EIR and Final EIS Measure B-13. *In conjunction with final design, the TCA shall, to the extent feasible, construct stream bank reinforcements of ungrouted riprap gabions or other appropriate material at the shallowest possible slope (2:1 or less), allowing for the replacement of soil and the subsequent revegetation of these areas with riparian plant species.*	Project Engineer and Resident Engineer	During Final Design	No						
Plant Species									
Minimization Measure PS-1: California Black Walnut Environmentally Sensitive Areas. Prior to clearing or construction, highly visible barriers (such as orange construction fencing) will be installed around the protected zone of any southern California black walnut tree and designated as an Environmentally Sensitive Area (ESA) to be preserved for those trees not within the footprint of project structures or areas of ground disturbance. The protected zone will extend 5 feet (ft) outside of the drip line or 15 ft from the trunk of the tree, whichever is greater. No grading or fill activity of any type will be permitted within the ESA. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner so as to prevent accidental damage to nearby California black walnut trees. No structure of any kind, or	Resident Engineer, Monitoring Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
incidental storage of equipment or supplies, will be allowed within the ESA. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where trees are immediately adjacent to planned grading activities.									
Minimization Measure PS-2: California Black Walnut Sapling Relocations. The California black walnut saplings in the median of the SR-241/SR-91 interchange will be assessed at the time of construction and relocated within Caltrans right-of-way, if feasible.	Resident Engineer, Project Biologist, and Construction Contractor	Prior to and during construction	No						
Minimization Measure PS-3: Coulter's Matilija Poppies Environmentally Sensitive Areas. Prior to clearing or construction, highly visible barriers (such as orange construction fencing) will be installed around the protected zone of any Coulter's Matilija poppies and designated as an ESA to be preserved to the extent feasible. The protected zone will extend 5 ft outside of the vegetation edge. No grading or fill activity of any type will be permitted within the ESA. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner so as to prevent accidental damage to nearby Coulter's Matilija poppies. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within the ESA. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where Coulter's Matilija poppies are adjacent to planned grading activities.	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No						
Animal Species									
Minimization Measure AS-1: Nesting Birds. Prior to clearing or construction, to avoid impacts to nesting birds, any native vegetation removal or tree- (native or exotic) trimming activities will occur outside of the bird nesting season (February 15 through August 31). In the event that vegetation clearing is necessary during the nesting season or if construction activities or access have the potential to impact nesting birds, a qualified biologist will conduct a preconstruction survey to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the qualified biologist. This buffer will be clearly marked in the field by construction personnel	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
under guidance of the qualified biologist, and construction or clearing will not be conducted within this zone until the qualified biologist determines that the young have fledged or the nest is no longer active. Construction of the Coal Canyon Undercrossing access ramp and widening of Windy Ridge Wildlife Undercrossing will be conducted outside the bird nesting season (February 15 through August 31). Periodic monitoring by the project biologist will be conducted as needed to ensure that construction activities do not impact bridge-nesting birds at Coal Canyon Undercrossing and Windy Ridge Wildlife Undercrossing.								
Minimization Measure AS-2: Bat Maternity Roosting Survey. A qualified bat biologist will survey the Project Area during the maternity roosting period, typically in June, to assess the potential for its use as a maternity roost because maternity roosts are generally formed in late spring. The qualified bat biologist will also perform preconstruction surveys because bat roosts can change seasonally. The surveys will include a combination of structure inspection, sampling, exit counts, and acoustic surveys.	Project Engineer and Project Bat Biologist	During Final Design and prior to construction	No						
Minimization Measure AS-3: Bridgework Schedule. To prevent impacts to bridge and crevice-roosting bats, all bridgework will be scheduled between September 1 and November 30 to avoid hibernating bats and the maternity season. If this is not feasible, temporary bat eviction and exclusion devices will be installed between September 1 and November 20 prior to the initiation of construction activities and under the supervision of a qualified bat biologist. Exclusion devices will be installed during the fall, or as otherwise directed by a qualified biologist, to avoid trapping flightless young inside during the summer months or hibernating individuals during the winter. Such exclusion efforts will be continued to keep the structures free of bats until the completion of construction on those structures, at which time the devices will be removed to allow the bats to resume roosting in the structure and prevent any permanent loss of bat-roosting habitat. All bat exclusion techniques will be coordinated	Project Engineer, Resident Engineer, and Project Bat Biologist	During Final Design and prior to construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
between the District Biologist and the resource agencies.									
Avoidance and Minimization Measure AS-4: Construction Work Activities. To avoid or minimize impacts to bats at a night roost, work activities are not to occur within 100 feet of the structure between sunset and sunrise. If construction work must be performed at night in the vicinity of the bridge structure containing a night roost, noise and direct lighting will be directed away from the structure or lighting will be specifically focused on the section of the bridge actively under construction to minimize impacts to night-roosting bats.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						
Avoidance and Minimization Measure AS-5: Bird Exclusion Netting. Airspace access to and from a bridge structure containing a night roost will not be restricted. Bird exclusion netting will not be used unless made from thick plastic and installed with no exposed overlap joints. Clearing of vegetation in the vicinity of the structure will also be minimized to the greatest extent practicable.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						
Minimization Measure AS-6: Unfilled Expansion. Subject to public health and safety considerations, existing unfilled expansion joints will remain unfilled and unobstructed to prevent permanent loss of existing day- and/or night-roosting habitat. Habitat for bats may be enhanced in the project limits by leaving newly created expansion joints unrubberized so that they are available to bats for day roosting after construction is complete.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						
Avoidance Measure AS-7: Burrowing Owl Survey. In accordance with the California Department of Fish and Wildlife survey guidelines for burrowing owl, a take avoidance survey shall be conducted no less than 14 days prior to initiating ground-disturbance activities and, if time lapses between project activities, a final survey may be conducted within 24 hours prior to ground disturbance.	Resident Engineer and Project Biologist	Prior to ground disturbance and during construction	No						
Threatened and Endangered Species									
Avoidance Measure TE-1: Construction Work Limits Review. During Final Design, the construction work limits will be reviewed to ensure that the lateral work limits are reduced to avoid designated Braunton's milk-vetch critical habitat and that construction staging areas are located in areas that have been previously	Project Engineer, Resident Engineer, Project Biologist, and Construction Contractor	During Final Design	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
disturbed or developed. All designated critical habitat for Braunton's milk-vetch adjacent to and outside the project disturbance limits will be delineated on the project specifications as environmentally sensitive areas (ESAs) prior to any construction activities near those areas.									
Avoidance and Minimization Measure TE-2: Thread-leaved Brodiaea Preconstruction Surveys and Environmentally Sensitive Areas. Preconstruction surveys will be conducted to determine if thread-leaved brodiaea is present in the Project Area. If this species is found in the Project Area, prior to clearing or construction, highly visible barriers (such as orange construction fencing) will be installed around the protected zone of any thread-leaved brodiaea individuals and designated as an ESA to be preserved to the extent feasible. The protected zone will extend 5 feet (ft) outside of the vegetation edge. No grading or fill activity of any type will be permitted within the ESA. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner so as to prevent accidental damage to nearby thread-leaved brodiaea. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within the ESA. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where thread-leaved brodiaea is adjacent to planned grading activities.	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No						
Avoidance Measure TE-3: Coastal California Gnatcatcher Survey. Prior to the commencement of grading operations or other activities involving disturbance of coastal sage scrub or areas of coastal California gnatcatcher designated critical habitat (with constituent elements), a survey will be conducted to locate coastal California gnatcatcher within 100 ft of the outer extent of projected soil disturbance activities and the locations of coastal California gnatcatchers shall be clearly marked and identified on the construction/grading plans. The 100 ft buffer outside the project soil disturbance limits will be clearly marked in the field by construction personnel under the guidance of the biologist. Construction or clearing will not be conducted within the project disturbance limits	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
adjacent to the 100 ft buffer until the biologist determines that the young have fledged or the nest is no longer active.									
Avoidance Measure TE-4: Barrier Installation. Prior to clearing or construction, highly visible barriers (such as orange construction fencing) will be installed around coastal sage scrub and coastal California gnatcatcher designated critical habitat (with constituent elements) adjacent to and outside the project footprint to designate ESAs. No grading or fill activity of any type will be permitted within the ESAs and no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner so as to prevent accidental damage to nearby ESAs. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within the ESAs. Silt fence barriers will be installed at the ESA boundaries adjacent to the project footprint to prevent accidental deposition of fill material in areas where vegetation is adjacent to planned grading activities.	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No						
Avoidance Measure TE-5: Construction Activities Monitoring. A qualified biologist will monitor all construction activities for the duration of the project construction in areas adjacent to ESAs to flush out any wildlife species present from the construction areas prior to construction and to ensure that vegetation removal, best management practices, ESAs, and all avoidance and minimization measures are properly followed.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						
Avoidance and Minimization Measure TE-6: Shielded Lighting. Shielded lighting will be used for any nighttime construction adjacent to coastal sage scrub within coastal California gnatcatcher designated critical habitat to avoid and minimize artificial night lighting effects on the gnatcatcher.	Resident Engineer, Project Biologist, and Construction Contractor	During construction	No						
Mitigation Measure TE-7: Section 7 Consultation. Prior to construction, Section 7 consultation with the United States Fish and Wildlife Service (USFWS) will be conducted to address effects to coastal California gnatcatcher and coastal California gnatcatcher occupied and/or critical habitat outside the Natural Communities Conservation (NCCP) Plan Area. Impacts to coastal sage scrub in coastal	Project Engineer and Project Biologist	During Environmental Document phase, Final Design, and after construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
California gnatcatcher occupied habitat or designated critical habitat outside the NCCP Area will be mitigated at a minimum mitigation ratio of 2:1 for permanent impacts and 1:1 for temporary impacts. The final mitigation ratio will be determined through coordination among Caltrans, the Foothill/Eastern Transportation Corridor Agency (F/ETCA), and the USFWS, and the federal Section 7 consultation between Caltrans and the USFWS. Re-initiation or a new formal Section 7 consultation is needed for the following reasons: a. To request concurrence with "May affect, not likely to adversely affect" determinations for Braunton's milk-vetch, thread-leaved broadiaea, least Bell's vireo, and southwestern willow flycatcher. b. To request concurrence with a "May affect, likely to adversely affect" determination for the coastal California gnatcatcher. c. To verify the proposed impacts to and mitigation for occupied coastal sage scrub (CSS), not occupied CSS, and designated coastal California gnatcatcher critical habitat covered and mitigated under the NCCP/HCP agreement and the Eastern Transportation Corridor (ETC) Biological Opinion (1-6-94-F-17). d. To verify that the proposed incidental take number of coastal California gnatcatcher (habitat supporting up to three pairs) will be within or exceed the amount of take specified in the incidental take statement included in the ETC Biological Opinion (1-6-94-F-17). e. To request concurrence with "May affect, not likely to adversely affect" determinations for Braunton's milk-vetch, Santa Ana sucker, and coastal California gnatcatcher critical habitat outside NCCP/Habitat Conservation Plan (HCP) covered areas.									
Avoidance and Minimization Measure TE-8: Foraging Special-Status Riparian Birds. Prior to vegetation clearing or construction within the species foraging habitat areas during the	Resident Engineer, Project Biologist, and Construction Contractor	Prior to vegetation clearing or construction	No						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
nesting periods (generally mid-March through August), a qualified biologist will conduct a preconstruction survey to identify the locations of any special-status riparian birds. If foraging individuals are found within the vegetation-clearing area during the breeding season, clearing will be delayed until the species is absent. Per the NCCP/HCP construction minimization measures, outside the breeding season, the monitoring biologist will flush NCCP/HCP identified species from the area, prior to brush-clearing and earth-moving activities.									
ETC Final EIR and Final EIS Measure B-27. *Grading and construction activities shall be redirected temporarily around any nesting sites for a distance of 500 ft for candidate and listed species of birds and at a distance of 1,000 ft for raptors during nesting and breeding seasons. ~~In the event that a coyote, bobcat, or mountain lion den is located, grading and construction operations shall be redirected around the den for a distance of 1,000 ft.~~ The nesting sites ~~and dens~~ should be resurveyed toward the end of the breeding seasons of these species to verify completion of the breeding cycle. Nests ~~and dens~~ that will be removed ~~due to ETC~~ must be removed during the nonbreeding season only.*									
Invasive Species									
Minimization Measure IS-1: Weed Abatement Program/Non-Standard Special Provisions. During Final Design, a qualified landscape architect will develop a Weed Abatement Program/Non-Standard Special Provisions (NSSP) for inclusion in the project specifications. The Weed Abatement Program/ NSSP will be developed in compliance with Executive Order 13112 to minimize the potential for intrusion or export of invasive plant species to and from the Biological Study Area during project construction. At a minimum, the following will be included in the Weed Abatement Program/NSSP and implemented prior to and during construction to address potential effects associated with invasive species. The Weed Abatement Program/NSSP will define the specific details, frequency, and, if applicable, performance standards for the following individual activities and requirements:	Project Landscape Architect, Project Engineer, Project Biologist, Resident Engineer, and Construction Contractor	During Final Design	Yes						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
					Initial	Date		Initial	Date
• Inspect and clean construction equipment at the beginning and end of each day and prior to transporting equipment from one project location to another. • Limit soil and vegetation disturbance to those areas specifically required for the project construction. • Obtain soil, gravel, and rock from weed-free sources. • Use only certified weed-free straw, mulch, and/or fiber rolls for erosion control during construction. • Prior to the completion of construction, revegetate affected areas adjacent to native vegetation with plant species that are native to the vicinity and approved by California Department of Transportation (Caltrans) District 12 Biologists. • Not use any species listed in the California Invasive Plant Council Invasive Plant Inventory with a High or Moderate rating in revegetation. • After construction, ensure that erosion control and revegetation sites are monitored until achievement of the project-specific performance standards defined in the Weed Abatement Program/NSSP or a period of 1 year, whichever is greater, after installation, to detect nonnative species prior to the establishment of the native vegetation. • Implement eradication procedures (e.g., spraying and/or hand weeding) should an infestation occur during or after construction. The use of herbicides will be prohibited within and adjacent to native vegetation, except as specifically authorized and monitored by Caltrans District 12 Biologists during and after project construction. • During construction, reduce indirect impacts of exotic plant infestations and litter by roadside maintenance at least once daily during construction to remove litter and weeds from the right-of-way.									